



Third Party and Special Inspections Requirements and Reports for Commercial Projects

Third Party Inspections and Reports are inspections that are required to be performed and reports that are required to be prepared by approved individuals or employees of an approved agency, other than employees of the Department of Building Inspections. (See footnote 1.)

Special Inspections and Reports are **Third Party Inspections and Reports** which are required by section 1705 of the Virginia Uniform Statewide Building Code.

Title 54, Section 54.1-402 of the Code of Virginia sets forth those structures which require an architect's or engineer's seal on drawings for proposed construction. **Special Inspections** are required for those structures which require a seal, unless excepted by section 1705.1 of the VUSBC.

All reports submitted to the Chesterfield County Department of Building Inspections must contain the Permit Number or they shall be rejected.

REQUIRED THIRD PARTY AND SPECIAL INSPECTIONS AND REPORTS

Fabricators of structural loadbearing members and assemblies (VUSBC section 1705.2)

Performed by the Special Inspections Engineer of Record

INSPECTION	REQUIREMENTS
FABRICATORS	In accordance with VUSBC section 1705.2

Steel construction (VUSBC section 1705.3)

Performed by the Special Inspections Engineer of Record (SEE FOOTNOTE 1)

INSPECTION	REQUIREMENTS
STEEL ELEMENTS OF BUILDINGS AND STRUCTURES	Fabricators in accordance with VUSBC section 1705.3.1 Material receiving in accordance with VUSBC section 1705.3.2 Erection in accordance with VUSBC section 1705.3.3 High Strength Bolts in accordance with

	<p>VUSBC section 1705.3.3.1</p> <p>Welding in accordance with VUSBC section 1705.3.3.2</p> <p>Details in accordance with VUSBC section 1705.3.3.3</p>
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Cast in place concrete construction (VUSBC section 1705.4 - see exceptions)

Performed by the Special Inspections Engineer of Record (SEE FOOTNOTE 1)

INSPECTION	REQUIREMENTS
MATERIALS	In accordance with VUSBC section 1705.4.1
INSTALLATION OF REINFORCING AND PRESTRESSING STEEL	<p>In accordance with VUSBC section 1705.4.2</p> <p>Includes full time monitoring of welding of reinforcing steel in the seismic force-resisting system of buildings of Seismic Performance Category C.</p>
CONCRETE FORMWORK	<p>In accordance with VUSBC section 1705.4.3</p> <p>Includes formwork prior to placement of concrete per ACI 318 section 6.1 and form removal and reshoring per ACI 318 section 6.2</p>
CONCRETING OPERATIONS (DURING PLACING AND CURING)	<p>In accordance with VUSBC section 1705.4.4</p> <p>Evaluation of concrete strength per ACI 318, section 5.6 except as exempted by VUSBC section 1908.3.2(3)</p> <p>Use of proper mix proportions and proper mix techniques per ACI 318, Chapter 4, sections 5.2, 5.3, 5.4 and 5.8</p> <p>Proper application techniques per ACI 318, sections 5.9 and 5.10</p> <p>Maintenance of specified curing temperatures and techniques per ACI 318, sections 5.11, 5.12 and 5.13</p>
INSPECTION DURING PRESTRESSING	<p>In accordance with VUSBC section 1705.4.5</p> <p>Per ACI 318, section 18.18 (Full time monitoring of stressing of tendons is required.)</p> <p>In building assigned to Seismic Performance Category C, inspections during the grouting of bonded prestressing tendons in the structural seismic-resisting system shall be performed.</p>

Precast concrete construction (VUSBC section 1705.4 - see exceptions)

Performed by the Special Inspections Engineer of Record

MANUFACTURE OF PRECAST CONCRETE ELEMENTS	<p>In accordance with VUSBC section 1705.4.6 The manufacture of off-site precast concrete elements shall be inspected per VUSBC section 1705.2</p> <p>The manufacture of on-site precast concrete elements shall be inspected as follows: Concrete mix, compressive strength and reinforcing steel shall comply with VUSBC requirements for cast-in-place concrete.</p>
ERECTION OF PRECAST CONCRETE ELEMENTS	<p>In accordance with VUSBC section 1705.4.7 Assembly shall be per approved fabrication and erection documents</p> <p>Welders and weld inspectors shall be certified in accordance with AWS D1.1, Chapter 5, Part C.</p> <p>Welded connections shall be per AWS D1.1 welding code, SJI Specifications, AISC, and the VUSBC.</p>

Masonry construction (VUSBC section 1705.5)

Performed by the Special Inspections Engineer of Record

INSPECTION	REQUIREMENTS
MATERIAL	Per ACI 530.1/ASCE 6/TMS 602 section 2.3
MASONRY STRENGTH	Per ACI 530.1/ASCE 6/ TMS 602 section 1.4
CONSTRUCTION OPERATIONS	<p>Proportioning, mixing consistency of mortar and grout: ACI 530.1/ASCE 6/TMS 602 section 2.6</p> <p>Application of mortar and grout: ACI 530.1/ASCE 6/TMS 602 section 3.2</p> <p>Installation of masonry units: ACI 530.1/ASCE 6/TMS 602 section 3.5</p> <p>Condition, size, location and spacing of reinforcement: ACI 530/ASCE 5/TMS 402 Chapter 8</p> <p>Protection of masonry during cold weather (temperature below 40 degrees F.) and hot weather (temperature above 100 degrees F.):</p>

	ACI 530.1/ASCE 6/TMS 602 section 1.8 Anchorage: ACI 530/ASCE 5/TMS 402 sections 4.2, 5.14
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Wood construction (VUSBC section 1705.6)

Performed by the Special Inspections Engineer of Record

INSPECTION	REQUIREMENTS
FABRICATED WOOD ELEMENTS OF BUILDINGS AND STRUCTURES	<p>In accordance with VUSBC section 1705.6, the fabrication process of wood structural elements and assemblies shall be in accordance with VUSBC section 1705.2 (Inspection of fabricators)</p> <p>Nailing, bolting, structural gluing or other fastening of the structural seismic-resisting system of buildings assigned to Seismic Performance Category C. (See VUSBC section 1610.1.7)</p>

Prepared fill (VUSBC section 1705.7 - see VUSBC section 1804.1 for required report)

Performed by the Geotechnical Engineer of Record (SEE FOOTNOTE 1)

INSPECTION	REQUIREMENTS
SITE PREPARATION	In accordance with VUSBC sections 1705.7.1
DURING FILL PLACEMENT	In accordance with VUSBC section 1705.7.2
EVALUATION OF IN-PLACE DENSITY (COMPACTION)	In accordance with VUSBC section 1705.7.3

Pile foundations (VUSBC section 1705.8)

Performed by the Geotechnical Engineer of Record (SEE FOOTNOTE 1)

INSPECTION	REQUIREMENTS
PILE FOUNDATION	In accordance with VUSBC sections 1705.8 and 1816 through 1824

Pier foundations for structures that house essential facilities that are required for post earthquake recovery (VUSBC section 1705.9)

Performed by the Geotechnical Engineer of Record

INSPECTION	REQUIREMENTS
PIER FOOTING	In accordance with VUSBC sections 1705.9, 1610.1.7 and 1815.0

Shallow footings and foundations (VUSBC chapter 18)

Performed by the Special Inspections Engineer of Record, the Geotechnical Engineer of Record or Chesterfield County Department of Building Inspections

INSPECTION	REQUIREMENTS
SHALLOW FOOTING	In accordance with VUSBC sections 1801 through 1811
FOUNDATION	In accordance with VUSBC sections 1812 through 1815 Pier foundations for structures that house essential facilities that are required for post earthquake recovery require Special Inspections performed by the Geotechnical Engineer of Record.

Retaining walls (VUSBC section 1825)

Performed by the Special Inspections Engineer of Record or the Geotechnical Engineer of Record (SEE FOOTNOTE 1)

INSPECTION	REQUIREMENTS
COMPACTION	In accordance with VUSBC section 1705.7 (see previous requirements for prepared fill)
BACKFILL	In accordance with VUSBC section 1812 and 1813.6
DRAINAGE AND WATERPROOFING	In accordance with VUSBC section 1813

Sprayed cementitious and mineral fiber fireresistive materials (VUSBC section 1705.12)

Performed by the Special Inspections Engineer of Record

INSPECTION	REQUIREMENTS
STRUCTURAL MEMBER	In accordance with VUSBC section 1705.12.1

SURFACE CONDITIONS	Performed prior to the application of the sprayed fireresistive material
APPLICATION	In accordance with VUSBC section 1705.12.2 Substrate temperature and area ventilation per manufacturer's written instructions
THICKNESS	In accordance with VUSBC section 1705.12.3 Floor, roof and wall assemblies per VUSBC section 1705.12.3.1 Structural frame members per VUSBC section 1705.12.3.2
DENSITY	In accordance with VUSBC section 1705.12.4 Frequency of samples taken to determine density shall be the same frequency used to determine thickness (see VUSBC sections 1705.12.3.1 and 1705.12.3.2)
BOND STRENGTH	In accordance with VUSBC section 1705.12.5 Frequency of samples taken to determine bond strength shall be the same frequency used to determine thickness (see VUSBC sections 1705.12.3.1 and 1705.12.3.2)

Exterior insulation and finish system - 'EIFS' (VUSBC section 1705.13)

Performed by the Special Inspections Engineer of Record

INSPECTION	REQUIREMENTS
FIELD APPLICATION	In accordance with manufacturer's installation instructions Areas less than 10,000 square feet are excepted.
PREFABRICATED EIFS PANELS	In accordance with manufacturer's installation instructions Areas less than 10,000 square feet are excepted.

FOOTNOTE 1: For buildings and structures that do not require special inspections pursuant to section 1705 of the VUSBC, County policy requires *Third Party Inspections and Reports*, pursuant to the foregoing table, from approved *Registered Design Professionals* for:

1. Steel Construction;
2. Cast in place concrete construction;
3. Prepared fill;
4. Pile foundations;
5. Retaining walls.

SPECIAL INSPECTIONS AND TESTING SERVICES

(WHEN REQUIRED BY SECTION 1705 OF THE VUSBC)

I. PROCEDURAL REQUIREMENTS

A. **General:** The **Owner** shall be responsible for retaining an independent **Special Inspections Engineer of Record (SIER)** to provide special inspections and testing services, including *Inspection and Testing Agency* supervision. Under no circumstances shall the **General Contractor (GC)** or any of the subcontractors be permitted to provide special inspections and testing services. The **GC** shall coordinate the scheduling of inspections. The *Inspection and Testing Agency* personnel required on-site shall be in numbers sufficient to perform all required tasks.

B. **Review and Approval:** As part of the *Statement of Special Inspections (SSI)* submitted for County approval and permit issuance, the **Owner** shall furnish the Commercial Inspections Supervisor of the Chesterfield County Department of Building Inspections with the names of the **SIER** and the *Inspection and Testing Agency* retained to provide special inspections and testing services. The **SSI** shall be reviewed and approved by the Chesterfield County Department of Building Inspections.

C. **Changes in Construction Team:** In the event that the **Architect of Record (AR)**, the **Structural Engineer of Record (SER)**, the **Geotechnical Engineer of Record (GER)**, the **General Contractor (GC)**, or the **Special Inspections Engineer of Record (SIER)** is changed during the course of the work, the **Owner** shall notify the Commercial Inspections Supervisor of the Chesterfield County Department of Building Inspections immediately. The **Owner** shall provide a written explanation for such change; shall identify and obtain approval for the replacement organization or replacement individual; and shall schedule a new meeting with the Chesterfield County Department of Building inspections and the replacement organization or replacement individual. The **Owner** shall ensure that there is a timely transfer of information and responsibility to the replacement party.

II. ROLES AND RESPONSIBILITIES

A. **Special Inspections:** The **SIER** shall provide and *certify* special inspections of building components and testing of construction materials where such inspections and testing are required by the Virginia Uniform Statewide Building Code (VUSBC), and/or the *Statement of Special Inspections*.

B. **Approved Documents:** Prior to conducting special inspections and materials testing, the **SIER** shall be responsible for verification of the following:

1. **Building Permit:** A building permit for the particular construction has been issued and a copy of it is available at the job site.
2. **Approved Construction Documents:** A set of original *County approved construction documents* is available at the construction site.

3. **Approved Fabrication and Erection Documents:** *County-approved fabrication and erection documents*, which also bear the **Structural Engineer of Record (SER)** review/approval stamp, are available at the job site. Other approved *fabrication and erection documents* which do not require County approval but which bear the **SER** review/approval stamp are available at the job site.
4. **Document Revisions:** All revisions to *County-approved construction documents* or other *fabrication and erection documents* have been approved, signed and sealed by the **Architect of Record (AR)**, **Structural Engineer of Record (SER)**, and/or **Geotechnical Engineer of Record (GER)**, as appropriate. If such revisions do not bear the County stamp of approval, the **SIER** shall confirm with the Chesterfield County Department of Building Inspections that such revisions were authorized by County staff. It shall be the **AR's**, **SER's**, and/or **GER's** responsibility to submit written revisions to the Chesterfield County Department of Building Inspections confirming orally approved field changes within seven working days of approval.

C. Deviations: The **SIER**, the **SIER's** representatives/field technicians shall not suggest, direct or authorize the fabricator, erector or contractor to deviate from the contract documents, *County-approved construction documents*, or *County-approved fabrication and erection documents*, without the express written approval of the **AR**, **SER**, or the Chesterfield County Department of Building Inspections, as appropriate.

D. Special Inspection Reports: The **SIER** shall report the results of testing and inspections, both approvals and rejections, to the Commercial Inspections Supervisor of The Chesterfield County Department of Building Inspections according to the following procedure:

1. **Seal and Signature:** Each report shall bear a signature and seal of the **SIER** and **shall include the correct building permit number** and project's address. **Reports without a permit number and project identification shall be rejected.**
2. **Submissions:** Both approval and rejection reports shall be submitted to all parties, i.e., The Commercial Inspections Supervisor of The Department of Building Inspections, the **Owner**, the **GC**, and the **AR**, **SER**, and/or **GER**. With the exception of situations where a code violation is discovered, all inspection and test reports shall be submitted to the Commercial Inspections Supervisor of The Chesterfield County Department of Building Inspections within seven working days of the inspection or test performed.
3. **Compliance:** Unless deficiencies are discovered or code violations are revealed during the conduct of special inspection and testing services, these reports shall indicate that the specified work has been inspected and found to be in compliance with *County-approved documents*.
4. **Deficiencies:** Deficiency reports shall contain the details describing the nature and specific location of the deficiency and include a description of the action recommended by the **AR**, **SER**, and/or **GER**, as appropriate, to correct it.

5. **Correction of Deficiencies:** At the completion of a project, all recorded problems or deficiencies shall be documented as having been corrected and approved by the **AR**, **SER**, and/or **GER** as appropriate.
6. **Completion Letters:** Upon completion of special inspections and testing for a particular construction, such as 'structural steel', the **SIER** shall, after review and approval by the appropriate **Registered Design Professionals**, submit a *Completion Letter* to the Commercial Inspections Supervisor of The Chesterfield County Department of Building Inspections.
7. **Final Report of Special Inspections:** Upon completion of all special inspections and testing for the scope of special inspections applicable to the construction project, the **SIER** shall, after review and approval by the appropriate **Registered Design Professionals**, submit a *Final Report of Special Inspections* to the Commercial Inspections Supervisor of The Chesterfield County Department of Building Inspections.

E. Code Violations: When the **SIER**, and/or **SIER** personnel discover a condition during the conduct of special inspection and/or testing services that constitutes a violation of the VUSBC, the **SIER** shall immediately notify the appropriate **Registered Design Professionals** of record and the Commercial Inspections Supervisor of The Chesterfield County Department of Building Inspections for resolution, followed with a written report submitted to the Commercial Inspections Supervisor of The Chesterfield County Department of Building Inspections within seven working days.

THIRD PARTY INSPECTIONS

(REQUIRED BY CHESTERFIELD COUNTY DEPARTMENT OF BUILDING INSPECTIONS WHEN SPECIAL INSPECTIONS ARE NOT REQUIRED BY SECTION 1705 OF THE VUSBC)

I. PROCEDURAL REQUIREMENTS

A. General: The **Owner** shall be responsible for retaining independent *Registered Design Professionals* to provide inspections of **steel construction, cast in place concrete construction, prepared fill, pile foundations, retaining walls and other items** of construction as required by the Chesterfield County Department of Building Inspections as applicable. Under no circumstances shall the **General Contractor (GC)** or any of the subcontractors be permitted to provide these inspection services. The **GC** shall coordinate the scheduling of inspections. The *Third Party Inspection* personnel required on-site shall be in numbers sufficient to perform all required tasks.

B. The **Owner** shall furnish the Commercial Inspections Supervisor of the Chesterfield County Department of Building Inspections with the names of the *Registered Design Professionals* retained to provide third party inspections.

II. ROLES AND RESPONSIBILITIES

A. Third Party Inspections: The *Registered Design Professionals* shall provide and certify *third party inspections* of building components where such inspections are required by the Chesterfield County Department of Building Inspections.

B. Approved Documents: Prior to conducting *third party inspections*, the *registered design professionals* shall be responsible for verification of the following:

1. **Building Permit:** A building permit for the particular construction has been issued and a copy of it is available at the job site.
2. **Approved Construction Documents:** A set of original *County-approved construction documents* is available at the construction site.

C. Deviations: The *Registered Design Professionals* and the *Registered Design Professionals'* representatives/field technicians shall not suggest, direct or authorize the fabricator, erector or contractor to deviate from the contract documents, *County-approved construction documents*, or *County-approved fabrication and erection documents*, without the express written approval of the **AR**, **SER**, or the Chesterfield County Department of Building Inspections, as appropriate.

D. Third Party Inspection Reports: The *Registered Design Professionals* shall report the results of testing and inspections to the Commercial Inspections Supervisor of The Chesterfield County Department of Building Inspections according to the following procedure:

1. **Seal and Signature:** Each report shall bear a signature and seal of the *Registered Design Professional* and **shall include the correct building permit number** and project's address. **Reports without the permit number and project identification shall be rejected.**
2. **Submissions:** All required inspection and test reports shall be submitted to the Commercial Inspections Supervisor of The Chesterfield County Department of Building Inspections within seven working days of the inspection or test performed.
3. **Compliance:** Unless deficiencies are discovered or code violations are revealed during the conduct of inspection and testing services, these reports shall indicate that the specified work has been inspected and found to be in compliance with *County-approved documents*.
4. **Deficiencies:** Deficiency reports shall contain the details describing the nature and specific location of the deficiency and include a description of the action recommended by the **AR**, **SER**, and/or **GER**, as appropriate, to correct it.
5. **Correction of Deficiencies:** At the completion of a project, all recorded problems or deficiencies shall be documented as having been corrected and approved by the **AR**, **SER**, and/or **GER** as appropriate.

6. **Completion Letters:** Upon completion of *Third Party Inspections* and testing for a particular construction, such as 'structural steel', the appropriate *Registered Design Professional* shall submit a *Completion Letter* to the Commercial Inspections Supervisor of The Chesterfield County Department of Building Inspections.
- E. Nothing herein shall be construed to prohibit the **AR**, **SER**, or **GER** from performing *Third Party Inspections*, as appropriate.